# All-Purpose Battery Charger TLG 1000 A1



- GB All-Purpose Battery Charger
  GF Operating instructions



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Read these operating instructions carefully before using the appliance for the first time and preserve this maual for later reference. Pass this manual on to whoever might acquire the appliance at a future date.

# ALL-PURPOSE BATTERY CHARGER

### Intended Use

The All Purpose Battery Charger is intended exclusively for:

- for the charging of rechargeable Ni Cd and Ni MH batteries with the sizes AAA/AA/C/D and 9 V block batteries to standard commercial rating capacities.
- domestic use only, it is not intended for commer cial applications.

# Items supplied

- All Purpose Battery Charger
- Operating manual

# Description of the appliance

- Charging slots for 9 V Block batteries (Charging slots 5 and 6; see fold out side)
- Charging slots for AAA / AA / C / D batteries (Charging slots 1 to 4; see fold out side)
- 3 LEDs (Operating status indicator)

# Technical data

Input Voltage: AC 100 240 V ~

60/50 Hz

Power consumption: 350 mA
Protection class: II / 🗆

Operating temperature: 0°C 25°C Storage temperature: 20°C 50°C

Output voltages:

6 x 1.4 V === (Charging slots 1 4)

 $2 \times 9 V =$  (Charging slots 5 6)

#### Charging currents:

6 x 400 mA (Type AAA) 6 x 1000 mA (Type AA)

4 x 1000 mA (Types C or D)

2 x 70 mA (9 V Block battery)

# Safety instructions

# **△** Fire hazard!

Do not place the Battery Charger:

- where it would be subject to direct sunlight.
   It could happen that the Battery Charger over heats and becomes irreparably damaged.
- in close adjacency to sources of heat. This includes for example ovens, fan heaters and similar appliances, as well as the ventilation openings of electrical devices. The Battery Charger could be irreparably damaged.
- in damp environments or in the vicinity of water.
   Moisture could permeate into the Battery Charger.
   There would then be the danger of receiving an electric shock and or causing a fire!
- Only charge rechargable batteries of the types "Ni Cd" and "Ni MH". NEVER recharge batteries of other types or non rechargable batteries.

  These are not suitable for recharging. Batteries not suitable for recharging can overheat and explode. It could irreparably damage the Battery Charger and the inserted batteries.

  There is also a risk of personal injury!



# **⚠** Danger of electrical shock!

Do not place the Battery Charger:

- in the close vicinity of water, e. g. baths and swimming pools. Should water permeate into the Battery Charger, the appliance could be irrepar ably damaged.
- Remove the power cable from the plug socket before cleaning the Battery Charger. You can thus avoid an electric shock. Should water or moisture permeate the Battery Charger despite observing all precautions, immediately remove the power cable from the plug socket.



This device suitable only for use indoors.

# ⚠ Injury hazard!

- Always store batteries out of the reach of children! There is a danger that children could swallow batteries! Due to the poisonous content of batteries there is a danger to life!
- When charging batteries never leave the Battery Charger unsupervised.
- The batteries could become hot during charging. NEVER touch hot batteries! There is a risk of being burnt! After charging batteries, first of all remove the power cable of the Battery Charger from the plug socket. Then allow the batteries to cool down before removing them from the Battery Charger.
- Should the power cable be defective, immedia tely arrange for it to be replaced by a service partner to avoid the risk of injury.
- The Battery Charger does not contain any user serviceable components. Should you open the housing of the Battery Charger, the warranty expires! Should repairs be needed, contact one of our service partners in your area.

- No liability or warranty will be accepted for damage caused by opening the appliance housing, repairs attempted by non qualified persons or improper use of the Battery Charger!
- Leakage of battery acids can occur, especially
  with old batteries. You should remove all batteries
  from the Battery Charger if you do not intend to
  use it for an extended period. You can thus
  protect the Battery Charger from leaking battery
  acids.
- This appliance is not intended for use by persons (including children) with reduced physical, sen sorial or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

#### Interaction with batteries

- Do not use damaged (corroded) batteries.
- Should batteries leak, avoid skin contact with them. This leads to skin irritation.
- Should a battery leak into the Battery Charger, clean it with a dry cloth. Wear protective gloves!

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# Commissioning

- Before taking the Battery Charger into use, check that all items are complete/available and free of visible damage.
- Place the Battery Charger on a straight, level, scratch and slip resistant surface.

### (i) Notice:

This appliance is equipped with non slip rubber feet. As furniture surfaces may be made of a variety of materials and are treated with many different types of cleaning agents, it cannot be completely ruled out that some substances contain ingredients which may corrode the rubber feet and soften them. If pos sible, place an anti slip material under the device.

 Compare the technical data with that of your current mains power supplier. If they are the same, connect the power cable to a mains power socket. The LEDs blink red three times.
 The Battery Charger is now ready for use.

# Charging batteries

# **△** Danger!

Charge exclusively rechargable batteries of the types "Ni Cd" and "Ni MH".

NEVER recharge batteries of other types or non rechargable batteries. These are not suitable for recharging. They could irreparably damage the Battery Charger and the inserted batteries. There is also the danger of a fire as well as an explosion!

### (i) Notice:

Ensure that the batteries are inserted into the charging slots in accordance with their polarities. Otherwise, the batteries will not be charged.

- Insert the batteries into the charging slots.
- Press the 9 V Block batteries into the charging slot until they audibly engage.

1 to 8 batteries can be individually charged:

 4 x Type C or Type D batteries in the charging slots 1 to 4, with additionally 2 x Type 9 Volt Block batteries in the charging slots 5 and 6.

or

- 6 x Type AA or AAA batteries in the charging slots 1 to 4, with additionally 2 x Type 9 Volt Block batteries in the charging slots 5 and 6.
- The charging process now begins. The Battery Charger has an LED for each charging slot. The LEDs of the charging slots indicate the charge state of the battery they contain.
- In the first 5 seconds the Battery Charger carries out a capacity test:

The LED of the charging slot glows green:
The battery capacity lies over 90 %.
The LED of the charging slot glows orange:
The battery capacity lies between 80 % 90 %.
The LED of the charging slot glows red:
The battery capacity lies under 80 %.
The LED of the charging slot blinks red
:
The battery is not properly inserted into the charging slot or is defect.

When the battery capacity has been determined, the charging process begins.



The various indicators have the following meanings:

The LED blinks alternatively red and green: The batteries are being charged and discharged alternately. (Refresh function: With this, older batteries or batteries that have been stored for a long time will be refreshed.)

The LED blinks green:

The batteries are being charged by a battery preserving impulse charge.

The LED continuously glows red: The batteries are being charged with the maximum charge current.

The LED continuously glows green: The batteries are fully charged and the Battery Charger has switched to a trickle charge.

### (i) Notice:

Should Type C or D batteries be charged in the outer charging slots, the operating condition is displayed by the respective outer LEDs.

# **△** Warning!

The batteries could become hot during charging. NEVER touch hot batteries! There is a danger of being burnt!

Remove the power cable of the Battery Charger from the plug socket and allow the batteries to cool down.

Afterwards you can remove the charged batteries from the Battery Charger.

### Calculating the average charging time

Dependant on the type, age and remaining battery charge, hence the charging process takes different lengths of time. The average charging times can be calculated using the following formula.

Note, however, that the times calculated are only indicative

Current time (Min.) = Capacity of the battery  $(mAh) \times 1.5 \times 60$ Charging current of the appliance (mA)

### Automatic charging control/ Retention charaina

This Battery Charger controls the charging time for rechargable batteries of the types Ni Cd and Ni MH separately. This control is based on the  $\Delta U$ ("minus Delta U") calculation.

In mathematics, with Delta  $\Delta$  differences are described

"Minus Delta U" in this case means a negative voltage difference.

This charge identification makes itself useful in the following effects:

Should a battery be charged with a constant current, its voltage rises continuously. When the battery is full, its voltage reaches a maximum and falls lightly with further current flow. This light fall in voltage is recognised by the charging electronics and the charge process is terminated. The Battery Charger automatically switches to "Retention charging". This means that the batteries are no longer being charged with continuous power, but with short power impulses instead. This counteracts the process of self discharge, thus retaining the batteries in a fully charged condition.

#### Timer control

In addition, this charger is fitted with a timer control, which after 17 hours automatically switches over to trickle charge. This serves as additional protection against overcharging should the charge terminating device not respond, due to a possibly defective battery.

# **Troubleshooting**

### The Battery Charger displays no functions

- Check to see if the power cable is correctly inserted into the power socket.
- Check to see if the power socket is "live". To do this, connect a different, functioning electrical appliance to the socket.

### The inserted batteries are not being charged

- · Check that the batteries are being inserted in accord with their polarity.
- Check that batteries suitable for charging have been inserted into the Battery Charger. Suitable for charging are exclusively rechargable Ni Cd and Ni MH batteries of the types AAA/AA/C/D and 9V Block batteries.
- Remove the power cable from the power socket and allow the appliance to cool down, as the temperature monitoring has possibly activated itself. Temperature monitoring ensures that the charging process is broken off as soon as a bat tery reaches an excessively high temperature.

#### Other malfunctions

Make contact with one of our service partners close to you if:

- the malfunction cannot be corrected as described above.
- · or, when operating the Battery Charger, other malfunctions occur.

# Cleaning



△ Danger! Disconnect the power cable before cleaning. There is the risk of receiving an electric shock! Ensure that moisture cannot penetrate into the device during cleaning!

Clean the housing of the Battery Charger only with a dry cloth. For stubborn soiling use a slightly damp cloth

Under no circumstances use moisture to clean the interior of the charger. Instead, use a soft and clean brush to clean the insides. DO NOT use abrasive or chemical cleaning agents.

# Disposal





Do not dispose of the appliance in your normal domestic waste. This product is subject to the European guideline 2002/96/EC.

Dispose of the appliance through an approved dis posal centre or at your community waste facility. Observe the currently applicable regulations. In case of doubt, please contact your waste disposal centre.

### Battery disposal!

Batteries may not be disposed of with normal domestic waste. All consumers are statutorily obliged to dispose of batteries at the collection point in their community/district or with the original supplier. The purpose of this obligation is to ensure that batteries can be disposed of in an environmentally friendly manner. Only dispose of batteries when they are fully discharged.



Dispose of all packaging materials in an environmentally responsible manner.

(GB)

# Warranty & Service

The warranty for this appliance is for 3 years from the date of purchase. The appliance has been manufactured with care and meticulously examined before delivery. Please retain your receipt as proof of purchase. In the event of a warranty claim, please make contact by telephone with our Service Depart ment. Only in this way can a post free despatch for your goods be assured.

The warranty covers only claims for material and maufacturing defects, but not for transport damage, for wearing parts or for damage to fragile components, e.g. buttons or batteries. This product is for private use only and is not intended for commercial use. The warranty is void in the case of abusive and improper handling, use of force and internal tampering not carried out by our authorized service branch. Your statutory rights are not restricted in any way by this warranty.

The warranty period will not be extended by repairs made under warranty. This applies also to replaced and repaired parts. Any damage and defects extant on purchase must be reported immediately after unpacking the appliance, at the latest, two days after the purchase date. Repairs made after the expiration of the warranty period are subject to payment.

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